characteristic by which the delocalization of electrons occurs easily due to having a conjugated structure in the chemical structure.

Subsequently, the charge transport layer (electronic transport layer) **5** is formed on the light emitting layer **4** having a thickness of about 10–50 nm by using a method of vacuum deposition or spin coating as required. The charge transport layer **5** helps whereby electrons are injected into the light emitting layer **4** from a metallic electrode for a cathode **6** formed thereon, and functions as the injection of electrons from the metallic electrode **6** to the light emitting layer is more efficient due to blocking that the holes proceed from anode to cathode.

Next, after coating the charge transport layer **5**, fabrication of the light emitting device is completed by forming the metallic electrode **6** to be used in the cathode by way of a vacuum deposition method. At this time, the metallic electrode **6** is formed using metals (Ca, Mg, or Al) having a low work function compared to the transparent electrode **2**. In the case of the metal (Ca, Al) which is oxidized easily in the air, the oxidation can be prevented by coating due to the vacuum deposition of aluminum or gold etc. thereon. The metal electrode **6** can be used by a suitable pattern process, forming a pattern by means of a shadow mask, etc.

Subsequently, the simultaneous oxygen moisture protecting film **7** is formed to shield overall surface of the accomplished light emitting device from an exterior oxygen and moisture. At this time, the oxygen, moisture protecting film **7** is attached by use of an adhesive due to using the polymer film of polyethyl naphthalate (PEN) derivatives.

Next, an oxygen protecting film **8** is formed on the simultaneous oxygen and moisture protecting film **7** and the other surface of the transparent plastic substrate **1** as one of the multiple polymer films, attaching the existing film by an adhesive or a spin coating or a doctor blade method. The polymer of transparent polyvinyl alcohol or polyvinyl acetate derivatives is used as the oxygen protecting film **8**.

Subsequently, the moisture protecting film **9** is formed as one of the polymer multiple layers on the oxygen protecting film **8** by a spin coating or doctor blade method, or the existing film is formed by use of an adhesive. The polymer of transparent polyethylene derivatives is used as the moisture protecting film **9**.

The fabrication method should be performed in a vacuum or inert atmosphere. The thickness of the protecting film **8**, **9** is 10–200 μm, the thickness of the transparent plastic substrate **1** should be 120 μm to maintain the transparency in the case of the film made of polyethyl naphthalate derivatives. An epoxy resin or the acryl series resin which can be hardened by ultraviolet is used as an adhesive.

As explained above, the encapsulation process according to the present invention, for protecting an organic or polymer light emitting device from an oxygen or moisture, forms a polymer protecting film by employing a spin coating or doctor blade method or by attaching a conventional protecting film by an adhesive.

In developing an organic or polymer light emitting display according to the present invention, for preventing penetration by oxygen or moisture in an air using the polymer multiple film, firstly, to increase the lifetime of the device, secondly, the fabricating process can be simplified by a spin coating, and a method of using an adhesive, as a result, there can be an encapsulation of a display device which comes by a low fabricating price and easy manufacture process. Thirdly, it does not damage the mechanical flexibility of an organic or polymer light emitting display device by use of the polymer multiple film, therefore, it has an effect that there increases the possibility of fabricating a wall-hanger TV screen in the form of roll. Fourthly, it is possible to fabricate a large-area flat panel display.

As described above, although the present invention has been described in detail with reference to illustrative embodiments, the invention is not limited thereto and various modifications and changes may be effected by one skilled in the art within the scope of the invention.

What is claimed is:

1. An encapsulation method of a polymer or organic light emitting device, said method comprising the steps of:

forming an organic or polymer light emitting device having a metal layer serving as a metallic electrode, on a transparent substrate; and

wrapping said device with multiple polymer films without contacting said metal layer to protect said organic or polymer light emitting device from oxygen and moisture.

2. The encapsulation method of a polymer or organic light emitting device according to claim **1**, wherein said multiple polymer films are formed by integrating a simultaneous oxygen and moisture preventing film, an oxygen preventing film and a moisture preventing film in series.

3. The encapsulation method of polymer or organic light emitting device according to claim **1**, wherein said transparent substrate includes a polymer of polyethyl naphthalate derivatives.

4. The encapsulation method of a polymer or organic light emitting device according to claim **1**, wherein said transparent substrate includes a thin rubber film of polyurethane derivatives.

5. The encapsulation method of a polymer or organic light emitting device according to claim **2**, wherein said simultaneous oxygen and moisture preventing film includes a polymer of polyethyl naphthalate derivatives.

6. The encapsulation method of a polymer or organic light emitting device according to claim **2**, wherein said oxygen preventing film includes one of the polymer thin films which include polyvinyl alcohol derivatives, polyvinyl acetate derivatives, polyvinyl alcohol acetate derivatives and is formed by a spin coating, doctor-blading or by attaching film with an adhesive.

7. The encapsulation method of polymer or organic light emitting device according to claim **2**, wherein said moisture preventing film includes a polymer thin film of polyethylene derivatives and is formed by spin coating, doctor-blading, or by attaching film with an adhesive.

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